

Implications of Psychological Research for Smoking Control Clinics

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WHILE PARTICIPATING at the first National Conference on Smoking and Health, the senior author (E.L.) became painfully aware of a lack of communication between psychologists engaged in research on smoking behavior and workers in the health-related professions who sponsor or operate smoking control clinics. In this paper, we attempt to bridge this gap by (a) describing some of the concepts, methods, and findings of psychological research and (b) suggesting possible applications of such information to smoking clinics.

Smoking withdrawal clinics are an important force in the battle against the health hazards of cigarette smoking. They offer help to many persons who wish to stop smoking but are unsuccessful in individual attempts to quit. Although a few smoking clinics employ standardized procedures as part of a research project (1), most have as their primary aim the rendering of service rather than the advancement of theories or the refinement of procedures. Careful assessment of effectiveness has rarely been characteristic of such clinics.

In contrast, psychological research on smoking typically proffers a public service as a secondary objective. In comparison with most smoking clinics, research programs have been characterized by fairly well-controlled experimental designs for treating small numbers of smokers. The two main categories of research have been (a) modification of smoking behavior and (b) attitude-change research.

Modification of smoking behavior has usually been carried out by clinical psychologists interested in applying principles of learning to maladaptive behavior. This technique is considered part of a general exploration of processes of behavioral change. Social psychologists have also found cigarette smoking fruitful in studying both change of attitude and the relationship between attitudes and behavior.

The findings of both these research thrusts are usually presented in technical psychological journals, and the data often appear equivocal. It is not surprising, therefore, that the findings have not pervaded the working knowledge of persons operating smoking clinics as a public service. In an

initial attempt at rapprochement, we tapped the available research literature and attempted to extrapolate pertinent data to suggested application in existing clinics. The discussion is organized around attrition, treatment techniques, followup, and data collection.

Attrition

Most smoking clinics have large numbers of dropouts. Such persons are usually failures and as such depress the success rates of the clinics.

Several behavior modification studies have used "deposit systems" that have largely eliminated attrition. Under this system, the smoker deposits with the researcher a specified sum of money to be returned on completion (successful or not) of the program. The deposits are obtained after the smokers have learned what the program will require of them.

Keutzer (2) found that only three of 149 smokers participating in her research program failed to complete the requirements after making a \$20 deposit. Subsequent experience with this method suggests that the symbolic commitment rather than the amount of the deposit may be the important feature. A \$5 deposit has proved just as effective as one of \$20 (3). If this perception is correct, and if it is not feasible for a clinic to collect a deposit, simply having smokers sign a contract or agreement stating they will complete the program may produce a significant decrease in attrition rates.

Treatment Techniques

Many techniques (lectures, demonstrations, suggestions, group discussion and reinforcement, and recordkeeping) used by smoking clinics are based on sound psychological principles. Incorporation of methods used in psychological research would serve, however, to expand this repertoire of techniques.

One important suggestion is a greater use of the smoker in an active, participative, rather than passive, role. Considerable evidence suggests that active involvement with the subject is directly related to learning. Despite the large number of smokers treated and the limitations of helping personnel, several possibilities might enhance the level of involvement of the clinic participant. One

of the simplest suggestions is to give the smokers a quiz at the end of a didactic presentation so that they must use the information presented. A difficult quiz, however, might antagonize smokers who may be reminded of unpleasant classroom experiences.

More acceptable, but still manageable within a large group, are some procedures recently developed by social psychologists studying group processes. The smokers might be distributed into several small groups with one member arbitrarily designated as discussion leader. Each group could then be assigned a different but explicit task. For example, if the focus is on communicating important information about smoking and health, the groups might be given the assignment of rank-ordering the information presented in terms of what seems most important.

Alternately, the task might entail having each member describe his greatest barrier to quitting and then having the other group members devise an effective counter argument. This procedure does more than exploit group pressure because most barriers are widely shared, and the rejoinders presented by each member of the group should also self-persuade that member to reduce his own barriers. It is somewhat like an internal debate in which each person attacks the defenses and weaknesses he knows best and offers arguments most understandable to him.

Role playing. Role playing has been used successfully in behavioral research to effect attitude and behavior change in numerous contexts. Janis and Mann (4) had female smokers portray a patient consulting a physician for a nagging cough. As part of the enactment, the smoker learned that she had a malignant tumor which required immediate removal and that, even with surgical intervention, the prognosis was poor. This portrayal aroused considerable fear which led to changes in both attitude and smoking behavior. While other studies of role playing with smokers (5) have produced considerably more modest outcomes, the effectiveness of role playing remains well documented.

Findings are unequivocal in suggesting the persuasive effect of playing a role counter to one's own position; movement toward the position espoused in the role-play situation is inevitable (6). Thus taking the part of a nonsmoker or verbalizing an extreme antismoking position tends to promote or strengthen an antismoking attitude. Role

playing can be adapted to large groups without undue difficulty.

The simplest approach would be to give each member an imaginary situation and have him write a position statement congruent with such circumstances. For example, the instruction might be, "Imagine you have a friend known to have emphysema but who continues to smoke. What kinds of things might you tell him?"

It will usually be more effective and interesting for the smokers to act out these counter roles in pairs rather than writing down the arguments. For example, one of a pair could play the role of a parent, and the other member could act as the teenage son or daughter who has just begun smoking. The "parent" then has the task of telling his teenager about the inadvisability of smoking. After reversing the roles, the impact of the procedure could be discussed in the entire group. The varieties of such roles and situations are endless (for example, physician and patient or husband and wife), and the number participating in the role enactments can also be varied. It is sometimes constructive to have the group leaders demonstrate the method before the group, although in groups of more imaginative and inventive persons the modeling might be unnecessary and could actually inhibit improvisation. Note, too, that role-play methods also promote involvement and participation, which facilitate learning and change.

Fear arousal. Many smoking clinics, such as the Five Day Plan (7), show films depicting chest operations and other gruesome scenes designed to arouse fear in the smoker and thus motivate him to stop smoking. The psychological literature on the effects of fear arousal on attitude and behavior change is exceedingly complex, and straightforward generalizations are difficult. But smoking clinic personnel should be aware of the evidence that extreme fear arousal often raises defensiveness, which sometimes leaves the target person more firmly entrenched in his original position (8). This reaction is especially likely to occur when the smoker does not see himself as being able to forestall the danger against which he is being warned. Seeing himself as unable to stop smoking, he frequently employs other defenses (rationalization, denial, or distortion) to ward off the perceived danger. Fear-arousal techniques should be used only when the smoker is also given methods to control his habit. The timing and magnitude of anxiety-arousing material should be

carefully considered.

One-sided versus two-sided presentation. Perhaps the majority of smoking clinic presentations offer an unremitting antismoking line, without regard for the so-called other side of the question. Intuitively, since the smokers have come to the clinic to be rid of their habit, the group leader might think it best to marshal all the reasons against smoking and deliver these through both barrels to the recalcitrant smokers.

Yet research in attitudinal change seems to suggest that the more effective approach usually includes explicit recognition (followed perhaps by a discounting) of the arguments on the other side (9). When it is fairly certain that persons will be exposed to the counter argument anyway (a virtual certainty considering the pervasiveness of cigarette advertising), it is often possible to "inoculate" them by selectively exposing them to these counter arguments. The objective is to encourage critical analysis of the false reasoning used in the counter argument. In actual practice in the smoking clinics, this procedure might entail discussion of the most appealing prosmoking "messages"—serving to immunize the smokers against future persuasive effects of these seductive appeals.

Relaxation training. Since many smokers use cigarettes in an effort to reduce tension, smoking clinics have attempted to suggest alternative means of relieving it following the abrupt cessation of smoking. Exercise, increased sleep, or tranquilizers are often recommended by the clinics. Research in behavior change offers an effective, nonmedical alternative: relaxation training. This method requires teaching persons how to become more aware of their muscular sensations so they can consciously relax various muscle groups of the body. Borrowing heavily from the writings of Jacobson (10), newer but shorter methods are now available. Basically, the smoker is asked to close his eyes and assume a comfortable position. He is then told to tense up a particular muscle group (for example, make a fist and squeeze) and to be aware of the accompanying sensations. After about 6 seconds he is told to abruptly relax the muscle complex and to note these sensations. The procedure then moves through other muscle groups of the body.

Common problems in using this technique with large groups are uncomfortable chairs, distracting noise, and self-consciousness. However, the fundamental features of the procedures are easily

presented to a large group, and interested participants can expand and continue the techniques privately in the comfort of their own homes. Upon achieving some level of skill in induced relaxation, the smoker can substitute the relaxed feeling for the anxiety he might ordinarily experience either as a stimulus leading to smoking or as a result of cigarette deprivation. Simple descriptions of relaxation methods can be found in Paul (11) and Wolpe and Lazarus (12). It is also possible to make tape recordings or obtain readymade tapes that can be either played for a group or that can be borrowed by interested smokers.

Situational control. While many smokers attribute their desire to smoke to an internal need or even to addiction, behavioral researchers believe that smoking is often elicited by identifiable situational cues. A cup of coffee, a cocktail, the end of a meal, a telephone call, a tense situation, or a pleasant social situation can all become strongly associated with smoking. Training the smoker to become aware of the association between various situations and his smoking can be exceedingly important in showing him both the learned links in the smoking habit and the potential for disconnecting such links. Careful recordkeeping is essential; the smoker might be given simple forms and asked to note the time and circumstances attending the smoking of each cigarette as well as his feelings (emotional state) before and during smoking.

As the situational cues become more obvious to the smoker, he can be encouraged to rearrange the circumstances of daily living so as to decrease the "need" for a cigarette; for example, if drinking coffee is found to be the most potent cue for smoking, a person might temporarily substitute tea or another drink for coffee until the association between the two has appreciably weakened.

Similarly, once the situational antecedents of smoking become clearly identified, the smoker might systematically reduce the range of stimuli for which his smoking is a response. An interesting application of this technique is described by Nolan (13), who produced a state of "time out" from various environmental reinforcers by having his wife smoke only when seated in a particular chair. The chair was placed so that she could not watch television, talk to family members, or engage in other pleasant activities. This constraint brought about a sharp reduction in his wife's smoking, and further reduction was later achieved

by making the chair less available. The New York City clinic described by Frederickson (14) illustrates the use of situational control principles in group settings.

Social reinforcement. That smoking behavior is affected by one's social environment is abundantly clear; the reactions of the smoker's spouse, peers, co-workers, and family can greatly influence when, if, and how much he smokes. Most smoking clinics have been quick to recognize and use this principle by attempting to bring group pressure or group reinforcement to bear on the smoker. In the Five Day Plan, this group pressure includes a buddy system—the smokers pair up and aid each other. The Five Day Plan has also begun to include the smoker's entire family in one of the meetings (15).

Since smoking, like other publicly performed personal habits, is at least partially maintained by reinforcing events in the social environment, altering the social consequences of smoking should be given even more extensive and systematic consideration in the smoking clinics. Simply asking the smoker to bring his spouse or close friend with him to the clinic might bring further social influence and personal support to bear against the smoking habit.

Another idea is that suggested by a study (16) in which smokers were supplied with two post cards to be given to friends. These cards contained explanations that the person was trying to stop smoking and that the encouragement of the friend would be appreciated. The friend receiving the card was to sign it and mail it to the researcher. These cards were considered proof that the smoker had carried out his assignment and that at least two persons significant in his social environment were actively assisting the smoker to break his habit.

Aversion smoke and satiation. A method shown to be successful in the laboratory could be readily extended into smoking clinics, particularly for use with the hard-core smoker (3). The procedure aims to develop an aversion to the sight and smell of cigarettes. Typically, the smoker is required to smoke rapidly, a drag every 6 seconds or so, until he becomes nauseated—at which time he extinguishes his cigarette. The experimenter then focuses the smoker's attention on the negative sensory experience. The procedure is repeated until the smoker cannot bear to smoke another cigarette. For maximum effectiveness, the proce-

cedure should be carried out for at least 3 consecutive days and then spaced as needed. Since the procedure requires no apparatus and since many smoking clinics (for example, the Five Day Plan) meet on consecutive nights, this technique could be easily adopted. We have used a similar procedure with a group of 35 smokers (2).

A related and economical variation entails asking smokers to greatly increase their smoking for a few days before an agreed-upon stopping time (17). Smokers might be instructed, for example, to triple their smoking for 3 days before coming to the first clinic meeting. By this means, smoking itself becomes unpleasant and the act of stopping serves as a "relief" (pleasant by comparison) condition. Because cigarettes become unpleasant, extraneous aversive stimuli, such as electric shock, are not needed to bring about or maintain the nonsmoking habit.

Followup Efforts

It is becoming apparent from experimental smoking modification studies (3) that most relapses occur during the first 2 or 3 months after treatment. If nonsmoking is to be maintained, clinics must provide for some kind of ongoing contact with the ex-smoker. The implied prescription is for clinics to make systematic followup checks. Relatively inexpensive checks can be telephone calls initiated by the clinic personnel, regular reports to the clinic of one buddy about his partner, or the return to the clinic of post cards, at predesignated intervals, by the clinic veteran. Post treatment booster programs might be offered for those who indicate a need for them.

Data Collection

In contrast to most behavioral research studies which place great emphasis on data collection in the form of smoking records, personal histories, attitude and personality tests, smoking rates, and outcomes associated with various treatment techniques, many smoking clinics do little or no systematic data collection. This discrepancy is understandable in view of their diverse goals. It is, after all, the business of research to collect data because accumulation of knowledge, rather than providing a service, is the primary goal. Conversely, smoking clinics are concerned with providing help, not conducting academic research. Yet, we contend that increased concern with data collection would facilitate rather than detract from the efforts of service-oriented smoking clinics.

The reasoning behind this contention should be made clear. An important aspect of the effectiveness of treatment pertains to the expectations and confidence of the smoker in the proffered treatment. Keeping smoking records, taking attendance, and filling out other information or test forms convey to the smoker that he is in a structured program with some definable rationale as a foundation. If, further, the information is collected in a manner that implies a personal and concerned interest in the smoker, rather than in a mechanistic and indifferent fashion, the groundwork is laid for trust and confidence in the clinic, cooperation in the procedures, and—the seemingly indispensable element of behavior change—expectations of success. And, as shown in smoking research (18), the very act of monitoring one's own behavior (as is required in keeping accurate smoking records) serves as a potent force in reducing, at least temporarily, the rate of smoking.

Finally, the value of knowledge about the results of treatment efforts cannot be overstated. To realize that one's efforts yield only modest success is sometimes discouraging, but such knowledge is indispensable in suggesting fruitful directions for change. A careful evaluation of effectiveness is strongly encouraged, especially in clinics that are set up to operate continuously or repeatedly in the same community.

It should be repeated that behavioral research has not yielded definitive answers to the problems of smoking control. However, much of practical value is contained in the research literature. We have highlighted what we believe to be the most salient features of the psychological literature. Interested readers are urged to consult several recent reviews for further information (19-21).

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